Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A network system for carrying out communication between a control station and a plurality of devices connected to a network and controlled by the control station, wherein the communication includes data communication which requires real-time attributes and message communication which does not require real-time attributes, ~~and wherein the data communication includes a first data communication in which data is transmitted from the control station to the devices and data in response to this transmission is transmitted from the devices to the control station, and a second data communication in which data is transmitted from the control station at a prescribed timing, the second data communication transmitting data of a higher priority than the first data communication,~~ comprising:

a plurality of transmission queues for temporarily storing transmission data provided in the control station, wherein the data communication includes a first data communication in which data is transmitted from the control station to the devices and data in response to this transmission is transmitted from the devices to the control station, and a second data communication in which data is transmitted from the control station at a prescribed timing, the second data communication transmitting data of a higher priority than the first data communication, wherein one of the queues holds transmission data for the second data communication;

wherein after the first data communication is carried out in accordance with a predetermined cycle time, an appropriate switching between the message communication and the second data communication is carried out in the remaining time of the cycle time to complete one cycle, whereafter the cycle is repeatedly carried out.

2. (Currently Amended) A network system for carrying out communication between a control station and a plurality of devices connected to a network and controlled by the control station, wherein the communication includes data communication which requires real-time attributes and message communication which does not require real-time attributes~~, and~~

~~wherein the data communication includes a first data communication in which data is transmitted from the control station to the devices and data in response to this transmission is transmitted from the devices to the control station, and a second data communication in which data is transmitted from the control station at a prescribed timing~~, comprising:

an establishment portion provided in the control station for independently establishing a cycle time for communication, wherein the data communication includes a first data communication in which data is transmitted from the control station to the devices and data in response to this transmission is transmitted from the devices to the control station, and a second data communication in which data is transmitted from the control station at a prescribed timing;

wherein the established cycle time is referenced at each communication cycle to determine the current cycle time; and

wherein after the first data communication is carried out, the message communication is carried out in the remaining time of the established cycle time to complete one cycle, whereafter the cycle is repeatedly carried out.

3. (Currently Amended) A control station for use in a network system for carrying out communication between the control station and a plurality of devices connected to a network and controlled by the control station, wherein the communication includes data communication which requires real-time attributes and message communication which does not require real-time attributes, ~~and wherein the data communication includes a first data communication in which data is transmitted from the control station to the devices and data in response to this transmission is transmitted from the devices to the control station, and a second data communication in which data is transmitted from the control station at a prescribed timing, the second data communication transmitting data of a higher priority than the first data communication,~~ comprising:

a plurality of transmission queues for temporarily storing transmission data, wherein the data communication includes a first data communication in which data is transmitted from the control station to the devices and data in response to this transmission is transmitted from the devices to the control station, and a second data communication in which data is transmitted from the control station at a prescribed timing, the second data communication

transmitting data of a higher priority than the first data communication, wherein one of the queues holds transmission data for the second data communication; and

control means for extracting appropriate data from the plurality of transmission queues;

wherein after the first data communication is carried out in accordance with a predetermined cycle time, the control means carries out an appropriate switching between the message communication and the second data communication in the remaining time of the cycle time to complete one cycle, whereafter the cycle is repeatedly carried out.

4. (Previously Presented) The control station of Claim 3, further comprising:

an establishment portion for independently establishing the cycle time, and for establishing the current cycle time by making reference to the independently established cycle time at each communication cycle.

5. (Currently Amended) A control station for use in a network system for carrying out communication between the control station and a plurality of devices connected to a network and controlled by the control station, wherein the communication includes data communication which requires real-time attributes and message communication which does not require real-time attributes, ~~and wherein the data communication includes a first data communication in which data is transmitted from the control station to the devices and data in response to this transmission is transmitted from the devices to the control station, and a second data communication in which data is transmitted from the control station at a prescribed timing,~~ comprising:

an establishment portion of the control station for independently establishing a cycle time, wherein the data communication includes a first data communication in which data is transmitted from the control station to the devices and data in response to this transmission is transmitted from the devices to the control station, and a second data communication in which data is transmitted from the control station at a prescribed timing;

means for determining the current cycle time by making reference to the independently established cycle time at each communication cycle, wherein after the first data

communication is carried out, the message communication is carried out in the remaining time of the cycle time to complete one cycle; and

means for repeatedly carrying out the cycle.

6. (Previously Presented) A network system for carrying out data communication which requires real-time attributes and message communication which does not require real-time attributes, comprising:

a control station and a plurality of devices connected to a network and controlled by the control station, and wherein the data communication includes a first data communication in which data is transmitted from the control station to the devices and data in response to this transmission is transmitted from the devices to the control station, and a second data communication in which data is transmitted from the control station at a prescribed timing;

wherein the control station includes a volume establishment portion configured to independently establish the total volume of message data transmitted between the control station and the devices in the next cycle during communication; and

wherein the devices carry out communication in a manner that does not exceed the total volume of message communication established by the control station at each communication cycle.

7. (Currently Amended) A control station for use in a network system for carrying out communication between the control station and a plurality of devices connected to a network and controlled by the control station, wherein the communication includes data communication which requires real-time attributes and message communication which does not require real-time attributes, ~~and wherein the data communication includes a first data communication in which data is transmitted from the control station to the devices and data in response to this transmission is transmitted from the devices to the control station, and a second data communication in which data is transmitted from the control station at a prescribed timing,~~ comprising:

a volume establishment portion configured to independently establish the total volume of message data transmitted between the control station and the devices in the next cycle during communication, wherein the data communication includes a first data communication in which data is transmitted from the control station to the devices and data in response to this

transmission is transmitted from the devices to the control station, and a second data communication in which data is transmitted from the control station at a prescribed timing; and

control means which carries out a control process to ensure the devices carry out communication in manner that does not exceed the total volume of message communication established by the control station at each communication cycle.

8. (Previously Presented) A device for use in a network system for carrying out communication between a control station and a plurality of devices connected to a network and controlled by the control station, comprising:

a plurality of transmission queues for temporarily storing transmission data including data communication data which requires real-time attributes and message communication data which does not require real-time attributes, and wherein the data communication includes a first data communication in which data is transmitted from the control station to the devices and data in response to this transmission is transmitted from the devices to the control station, and a second data communication in which data is transmitted from the control station at a prescribed timing, the second data communication transmitting data of a higher priority than the first data communication;

means for storing transmission data in the plurality of transmission queues;

control means for extracting appropriate data from the plurality of transmission queues; and

transmission means for transmitting transmission data extracted by the control means;

wherein at least one of the transmission queues holds second data communication data, and at least one of the transmission queues holds both first data communication data and message communication data.

9. (Previously Presented) The network system of Claim 1, wherein the second data communication includes at least one of cyclic data or change of state (COS) data.

10. (Previously Presented) The network system of Claim 2, wherein the second data communication includes at least one of cyclic data or change of state (COS) data.

11. (Previously Presented) The control station of Claim 3, wherein the second data communication includes at least one of cyclic data or change of state (COS) data.

12. (Previously Presented) The control station of Claim 5, wherein the second data communication includes at least one of cyclic data or change of state (COS) data.

13. (Previously Presented) The network system of Claim 6, wherein the second data communication includes at least one of cyclic data or change of state (COS) data.

14. (Previously Presented) The control station of Claim 7, wherein the second data communication includes at least one of cyclic data or change of state (COS) data.

15. (Previously Presented) The device of Claim 8, wherein the second data communication includes at least one of cyclic data or change of state (COS) data.